Lesson 16: Arrange Objects Into Arrays

Standards Alignments

Building On   2.OA.C.4
Addressing   3.OA.A.1

Teacher-facing Learning Goals

- Build arrays with physical objects and describe them in terms of multiplication.
- Describe an array as an arrangement of objects into rows with an equal number of objects in each row and into columns with an equal number in each column.

Student-facing Learning Goals

- Let's make some arrays.

Lesson Purpose

The purpose of this lesson is for students to describe arrays and arrange objects into arrays.

In grade 2, students were introduced to arrays and related them to addition expressions and equations. In this lesson, students deepen their understanding of arrays as they arrange physical objects and relate arrays to multiplication and equal groups. Students use connecting cubes to represent arrays in Activity 2 and in the cool-down.

When working with array situations, students may see the equal groups in an array in either the rows or the columns. For example, when representing 3 rows of 5 chairs, they may create a 3 by 5 array or a 5 by 3 array. This is fine as long as students can correctly describe where the "3 rows of 5 chairs" are in their array. Students will learn about commutativity in the last lesson in this section, so if questions about commutativity arise, record them publicly for discussion in that lesson.

Access for:

♿ Students with Disabilities

- Representation (Activity 2)

🌐 English Learners

- MLR8 (Activity 2)

Instructional Routines

Notice and Wonder (Warm-up)

Materials to Gather

- Connecting cubes: Activity 2

Lesson Timeline

Warm-up	10 min
Activity 1	15 min
Activity 2	20 min
Lesson Synthesis	10 min
Cool-down	5 min

Teacher Reflection Question

In previous grades, students saw examples of arrays, such as 10-frames, and counted objects arranged in arrays. How does that previous experience support their work with equal groups in arrays in this lesson?

Cool-down (to be completed at the end of the lesson)   🕐 5 min

Array Arrangement

Standards Alignments

Addressing   3.OA.A.1

Student-facing Task Statement

Arrange 12 cubes into an array.

Explain or show how the array is related to multiplication.

Student Responses

Sample response: It's related to multiplication because there are 4 cubes in each row, which is like 3 equal groups.